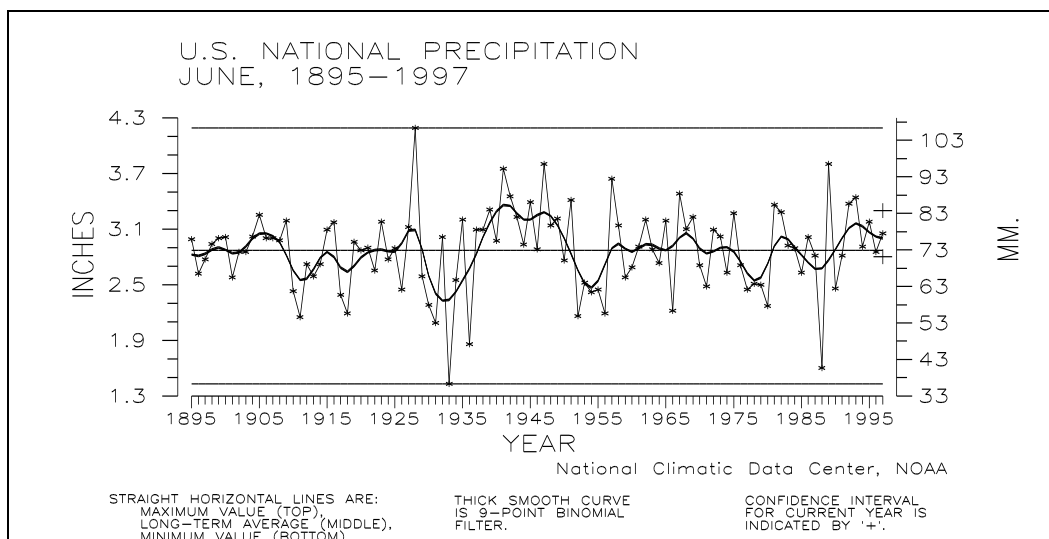
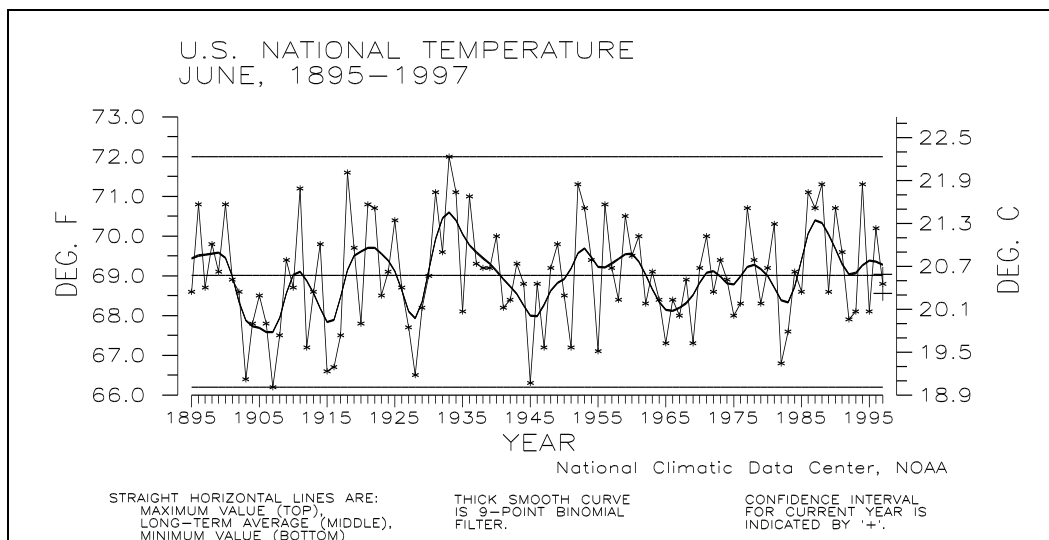


CLIMATE VARIATIONS BULLETIN



This CLIMATE VARIATIONS BULLETIN (CVB) is a preliminary report that puts current monthly climate anomalies into historical perspective using climate databases archived at the National Climatic Data Center (NCDC). It is issued on a monthly basis. Supplemental sections are included which address seasonal and annual perspectives, when appropriate.

Current data are based on preliminary reports from River Forecast Center stations and First and Second Order airport stations obtained from the National Weather Service (NWS) Climate Prediction Center (formerly, Climate Analysis Center), and preliminary tornado statistics obtained from the NWS National Severe Storms Forecast Center. THE CURRENT DATA SHOULD BE USED WITH CAUTION. These preliminary data are useful for estimating how current anomalies compare to the historical record, however the actual values and rankings for the current year will change as the final data arrive at NCDC and are processed.

The following NCDC datasets are used for the historical data: the climate division drought database (TD-9640), the hurricane datasets (TD-9636 and TD-9697), the tornado dataset (STORM DATA), and the monthly station dataset (LCD supplemental files). It should be noted that the climate division drought database consists of monthly data for 344 climate divisions in the contiguous United States. These divisional values are calculated from the 6000+ station Cooperative Observer network.

If you have access to the Internet, copies of the CVB are available via both the NCDC's World Wide Web (WWW) server and the NCDC's anonymous FTP server.

NCDC's WWW server

URL for the CVB: <http://www.ncdc.noaa.gov/publications/cvb/cvb.html>

NCDC's anonymous FTP server

Machine: <ftp.ncdc.noaa.gov>

Directory: [/pub/data/cvb](ftp://ftp.ncdc.noaa.gov/pub/data/cvb)

If you are a climate researcher and would like to order copies of the historical datasets used to make graphs of the type in this report, call 704-271-4994 or fax a letter to 704-271-4876 or mail a letter to the address given below, ATTN: Research User Services.

All other questions or requests for data should be made by calling 704-271-4800 or sending a fax to 704-271-4876 or by writing to:

National Climatic Data Center, NOAA
Federal Building
151 Patton Avenue, Room 120
Asheville, NC 28801-5001

If you use any of the information from this CVB, please identify "National Climatic Data Center, NOAA" as the source.

UNITED STATES JUNE CLIMATE IN HISTORICAL PERSPECTIVE

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TABLE 1. PRECIPITATION AND TEMPERATURE RANKS, BASED
ON THE PERIOD 1895-1997. 1 = DRIEST/COLDEST,
103 = WETTEST/WARMEST FOR JUNE 1997,
103 = WETTEST/WARMEST FOR MAY-JUNE 1997,
103 = WETTEST/WARMEST FOR JAN-JUNE 1997,
102 = WETTEST/WARMEST FOR JULY 1996-JUNE 1997.

REGION	JUN 1997	MAY-JUN 1997	JAN-JUN 1997	JUL 1996- JUN 1997
-----	----	-----	-----	-----
PRECIPITATION:				
NORTHEAST	8	24	12	91
EAST NORTH CENTRAL	45	25	27	44
CENTRAL	50	55	39	66
SOUTHEAST	55	47	42	70
WEST NORTH CENTRAL	57	37	45	74
SOUTH	82	59	77	98
SOUTHWEST	65	43	64	70
NORTHWEST	77	78	89	102
WEST	102	70	34	71
NATIONAL	69	39	50	97
TEMPERATURE:				
NORTHEAST	54	18	55	59
EAST NORTH CENTRAL	77	26	46	19
CENTRAL	23	6	35	17
SOUTHEAST	5	1	55	37
WEST NORTH CENTRAL	87	71	58	21
SOUTH	12	9	26	20
SOUTHWEST	59	79	80	85
NORTHWEST	54	86	82	81
WEST	59	100	96	97
NATIONAL	48	35	64	37

TABLE 2. EXTREMES, 1961-90 NORMALS, AND 1997 VALUES FOR JUNE. IT SHOULD BE NOTED THAT THE 1997 VALUES WILL CHANGE WHEN THE FINAL DATA ARE PROCESSED.

REGION	PRECIPITATION (INCHES)					
	DRIEST		WETTEST		NORMAL	1997
-----	VALUE	YEAR	VALUE	YEAR	PCPN	PCPN
-----	-----	-----	-----	-----	-----	-----
NORTHEAST	1.60	1988	8.53	1972	3.84	2.24
EAST NORTH CENTRAL	1.41	1910	6.68	1967	3.89	3.76
CENTRAL	1.03	1988	9.10	1928	3.95	4.08
SOUTHEAST	2.20	1931	8.37	1900	4.86	4.95
WEST NORTH CENTRAL	1.25	1933	5.27	1947	2.73	2.85
SOUTH	.98	1933	6.85	1989	3.66	4.59
SOUTHWEST	.16	1916	1.93	1927	.93	.93
NORTHWEST	.32	1919	3.02	1947	1.48	1.89
WEST	.01	1935	1.14	1963	.46	1.14
NATIONAL	1.43	1933	4.19	1928	2.84	3.05*

* PRELIMINARY VALUE, CONFIDENCE
INTERVAL + OR - .25 INCHES

REGION	TEMPERATURE (DEGREES F)					
	COLDEST		WARMEST		NORMAL	1997
-----	VALUE	YEAR	VALUE	YEAR	TEMP	TEMP
-----	-----	-----	-----	-----	-----	-----
NORTHEAST	60.3	1958	68.6	1943	64.4	65.1
EAST NORTH CENTRAL	59.5	1969	72.4	1933	65.3	66.9
CENTRAL	66.2	1903	77.6	1952	71.3	70.1
SOUTHEAST	73.0	1955	80.8	1952	75.8	73.5
WEST NORTH CENTRAL	56.7	1951	71.6	1988	63.2	65.1
SOUTH	72.1	1903	83.8	1953	77.6	76.1
SOUTHWEST	63.4	1907	72.8	1994	68.1	68.1
NORTHWEST	54.9	1953	64.8	1918	59.9	59.3
WEST	62.2	1944	74.0	1918	67.7	67.7
NATIONAL	66.2	1907	72.0	1933	69.0	68.8*

* PRELIMINARY VALUE, CONFIDENCE
INTERVAL + OR - .2 DEG. F.

TABLE 3.

STATISTICS FOR SELECTED RIVER BASINS: PRECIPITATION RANKING FOR OCT-JUN 1996-97, WHERE RANK OF 1 = DRIEST, 102 = WETTEST, BASED ON THE PERIOD 1895 TO 1997, AREAL PERCENT OF THE BASIN EXPERIENCING SEVERE OR EXTREME LONG-TERM (PALMER) DROUGHT, AND AREAL PERCENT OF THE BASIN EXPERIENCING SEVERE OR EXTREME LONG-TERM (PALMER) WET CONDITIONS, AS OF JUNE 1997.
RIVER BASIN REGIONS AS DEFINED BY THE U.S. WATER RESOURCES COUNCIL.

RIVER BASIN -----	PRECIPITATION RANK -----	% AREA DRY -----	% AREA WET -----
MISSOURI BASIN	52	.0%	33.3%
PACIFIC NORTHWEST BASIN	102	.0%	58.6%
CALIFORNIA RIVER BASIN	72	56.3%	4.2%
GREAT BASIN	79	5.8%	18.2%
UPPER COLORADO BASIN	81	.0%	.0%
LOWER COLORADO BASIN	45	24.6%	.0%
RIO GRANDE BASIN	73	.0%	23.3%
ARKANSAS-WHITE-RED BASIN	59	.0%	4.5%
TEXAS GULF COAST BASIN	64	.0%	29.7%
SOURIS-RED-RAINY BASIN	53	.0%	16.9%
UPPER MISSISSIPPI BASIN	50	.0%	4.2%
LOWER MISSISSIPPI BASIN	84	.0%	16.2%
GREAT LAKES BASIN	73	.0%	4.1%
OHIO RIVER BASIN	40	.0%	7.7%
TENNESSEE RIVER BASIN	81	.0%	51.9%
NEW ENGLAND BASIN	63	.0%	7.7%
MID-ATLANTIC BASIN	57	.0%	.0%
SOUTH ATLANTIC-GULF BASIN	53	.0%	1.8%

U.S. NATIONAL TEMPERATURE JUNE, 1895-1997

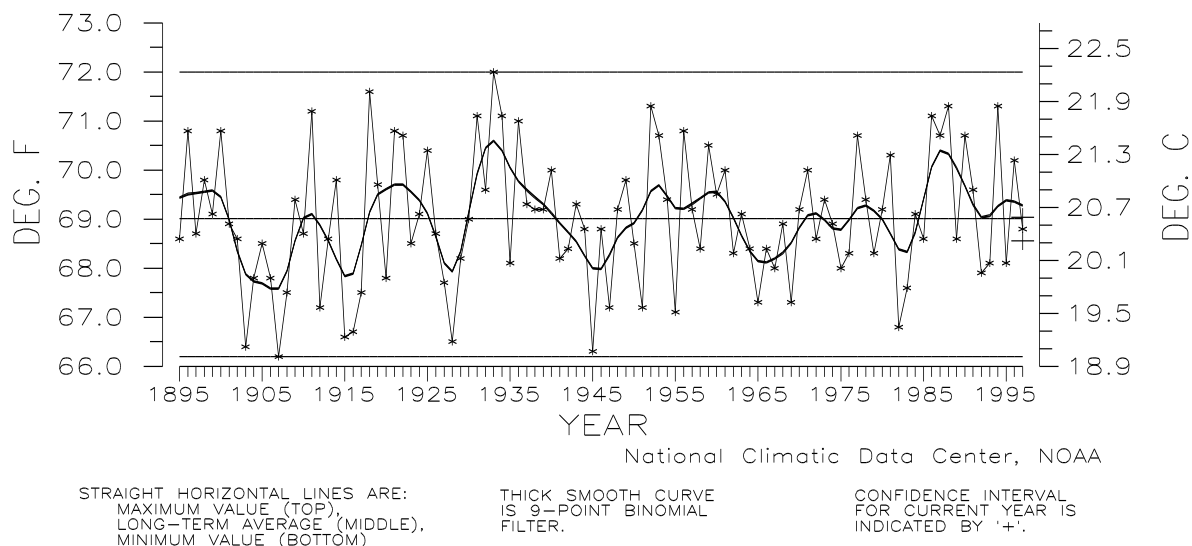


Figure 1: Preliminary data for June 1997 indicate that temperature averaged across the contiguous United States was near the long-term mean ranking as the 48th coolest June since 1895. Fifteen percent of the country was much cooler than normal while three percent of the country was much warmer than normal.

U.S. NATIONAL PRECIPITATION JUNE, 1895-1997

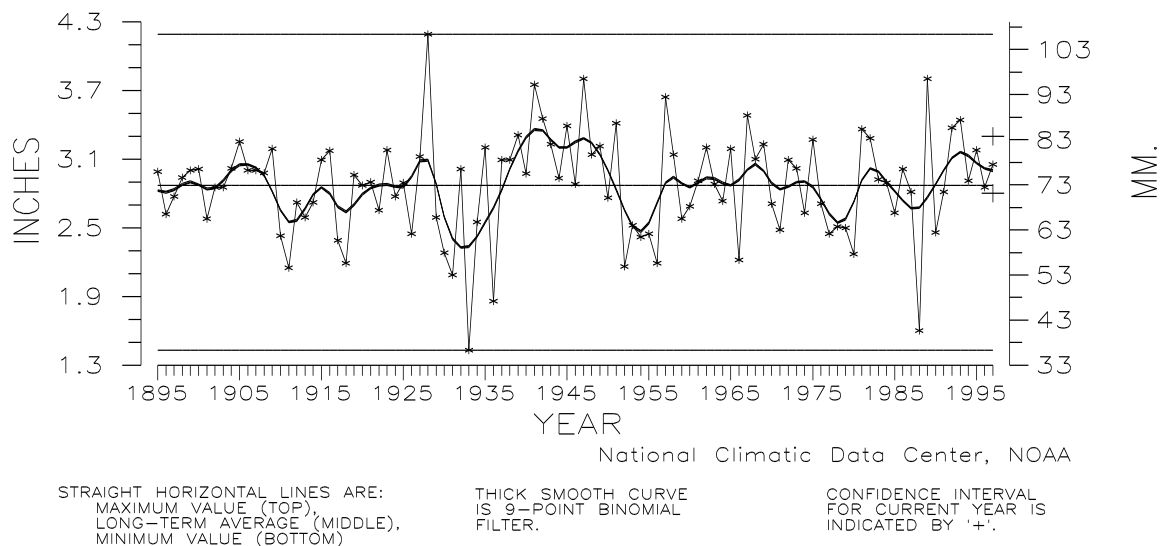


Figure 2: June 1997 was the 35th wettest such month since 1895. Over twelve percent of the country experienced much wetter than normal conditions while about four percent of the country was much drier than normal.

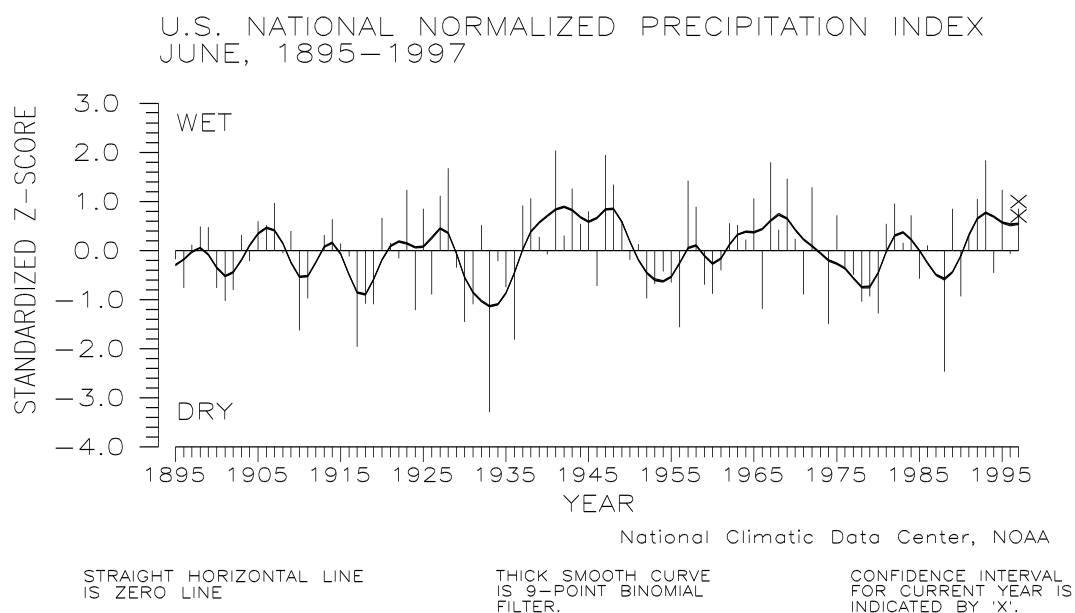


Figure 3: The preliminary national standardized precipitation index ranked June 1997 as the 21st wettest such month on record. This standardized z-score is estimated to be accurate to within 0.149 index units and its confidence interval is shown as an 'X'.

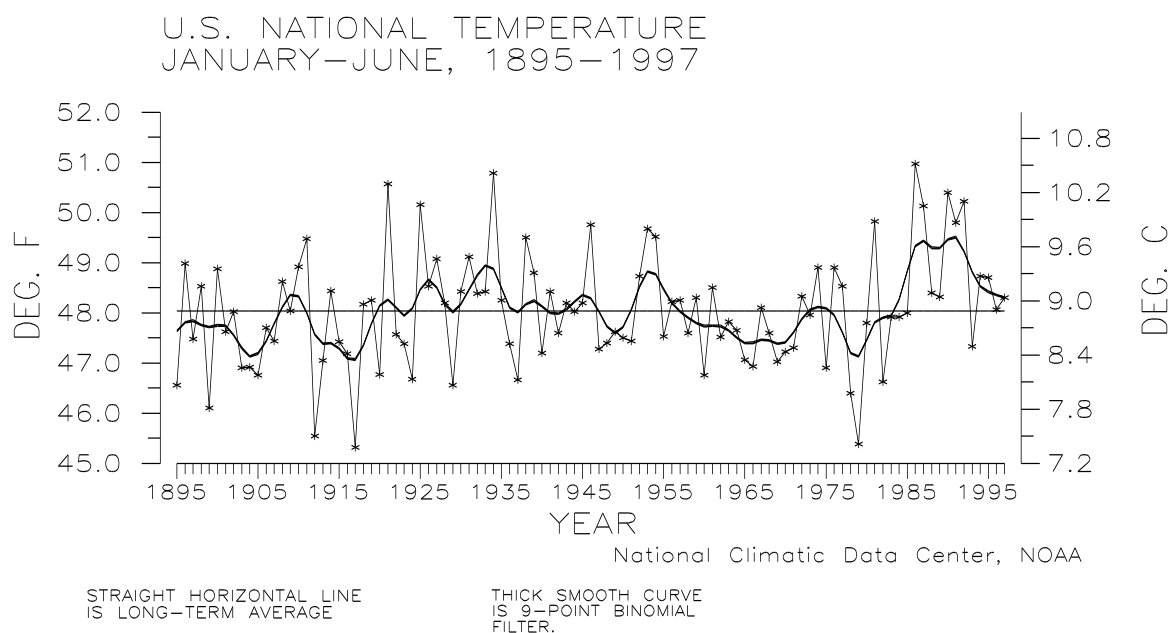


Figure 4: Based upon preliminary data, January-June 1997 was the 40th warmest such period on record. Over seven percent of the country had much warmer than normal January-June temperatures while over ten percent of the country was much cooler than normal.

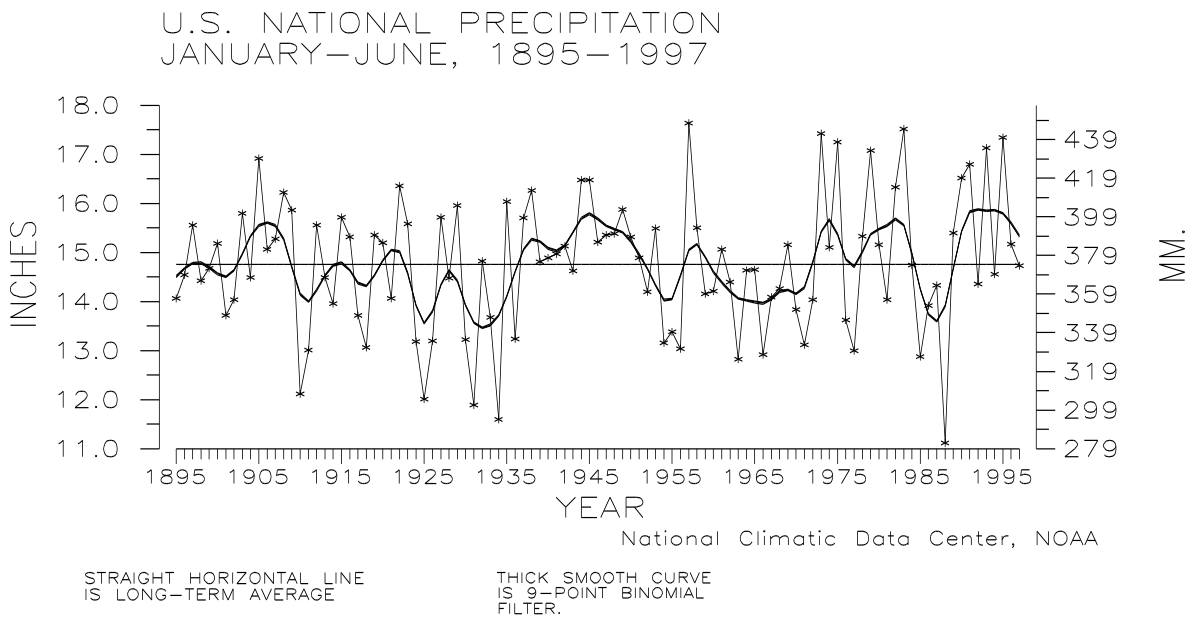


Figure 5: Preliminary precipitation data indicate that the year-to-date, January-June 1997, was the 50th driest such six-month period since records began. About eight percent of the country was much drier than normal while just over eight percent of the country was much wetter than normal.

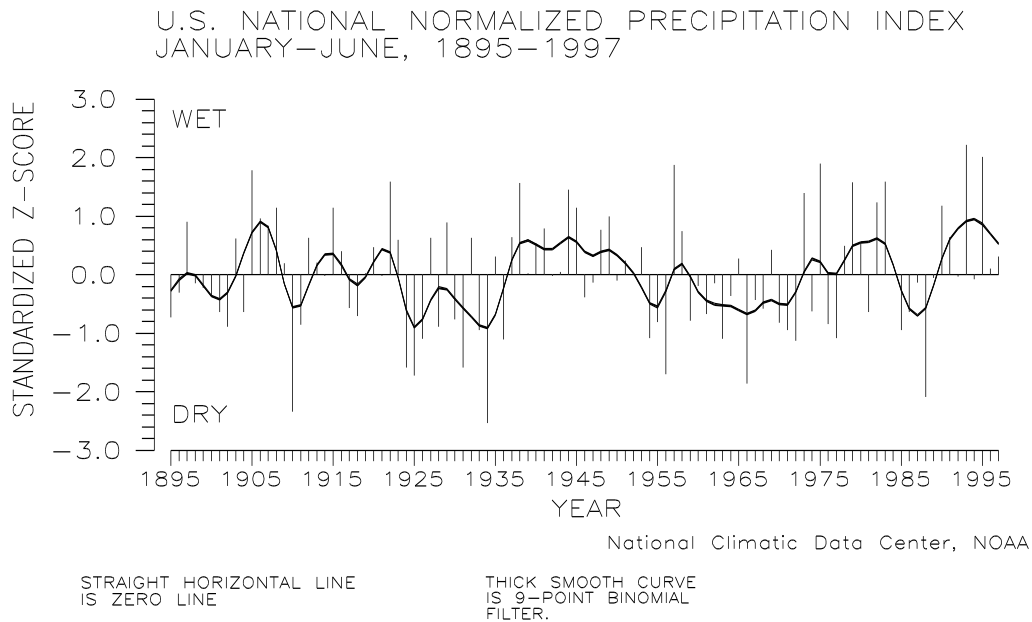
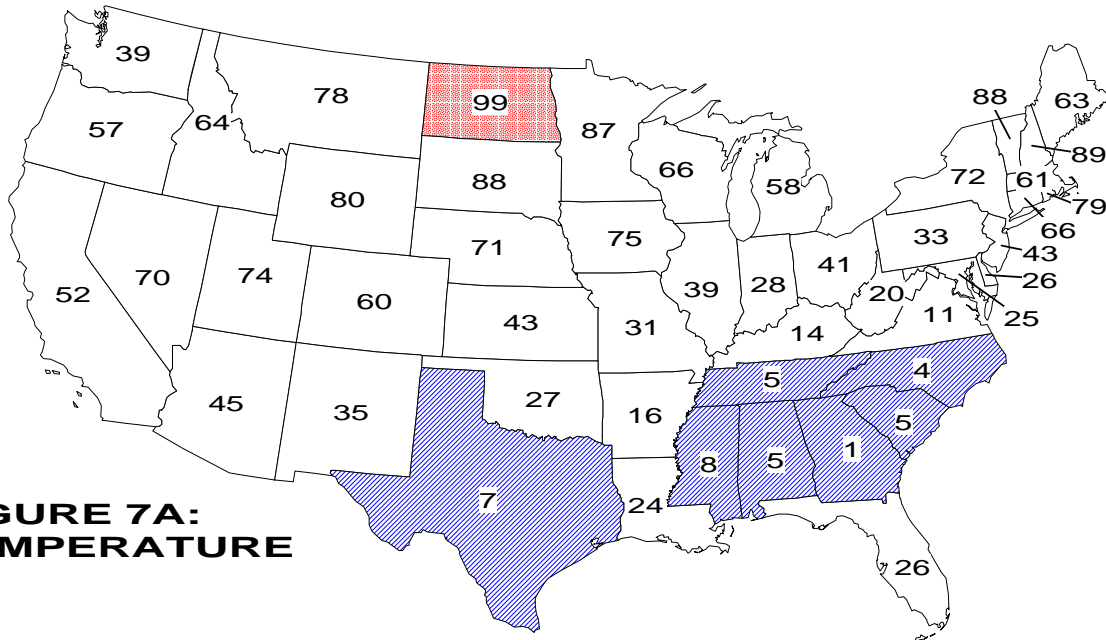
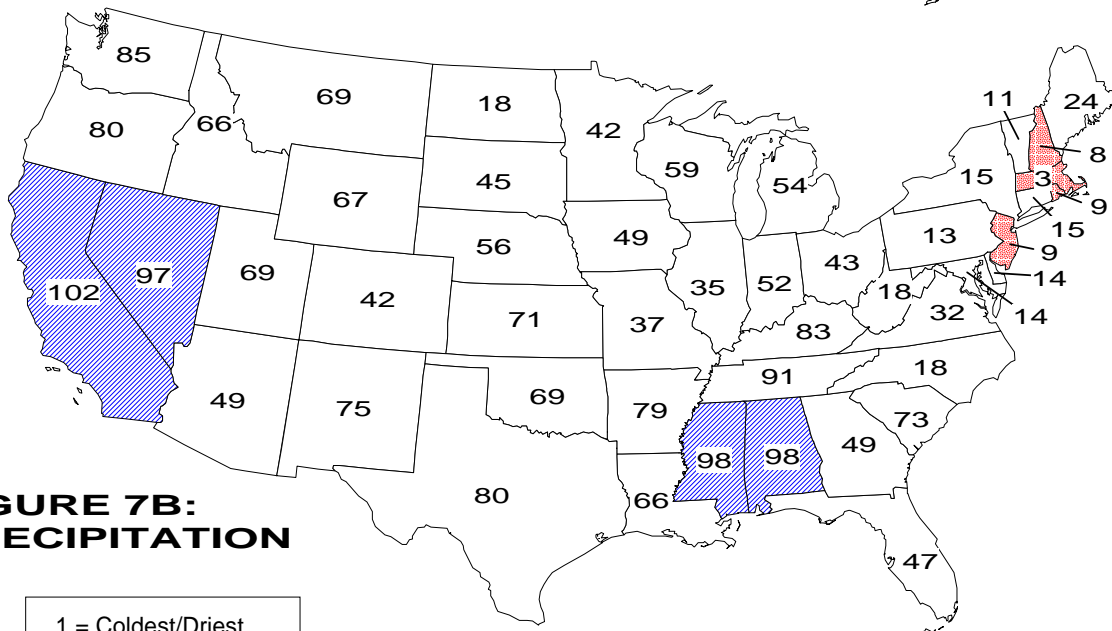


Figure 6: The preliminary national year-to-date standardized precipitation index ranked January-June 1997 as the 39th wettest such period since 1895.

JUNE 1997 STATEWIDE RANKS



**FIGURE 7A:
TEMPERATURE**



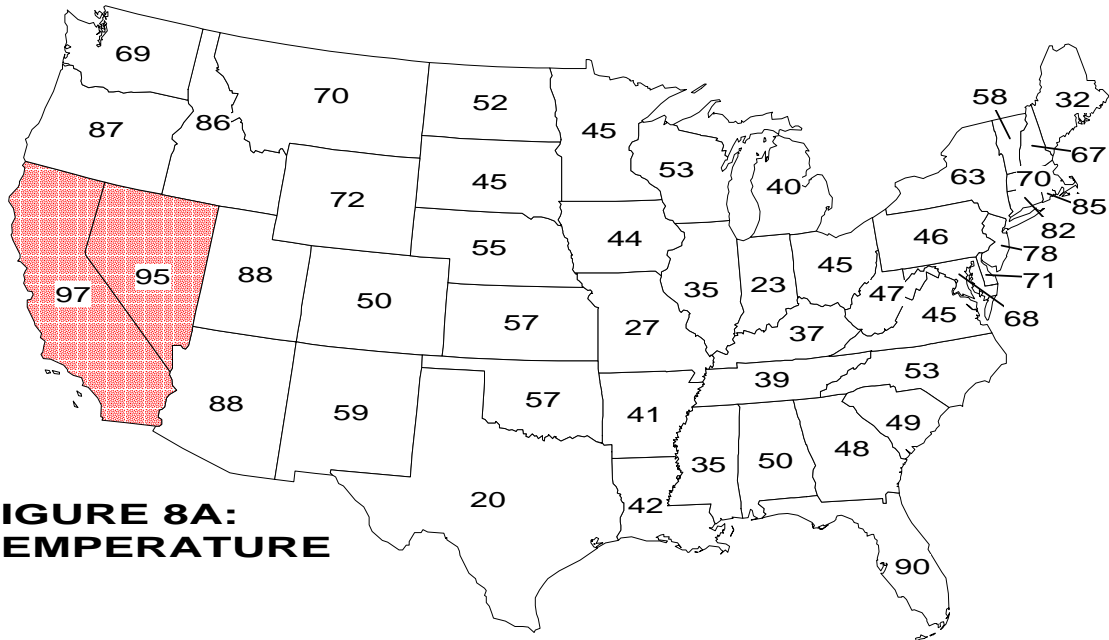
**FIGURE 7B:
PRECIPITATION**

1 = Coldest/Driest
103 = Warmest/Wettest

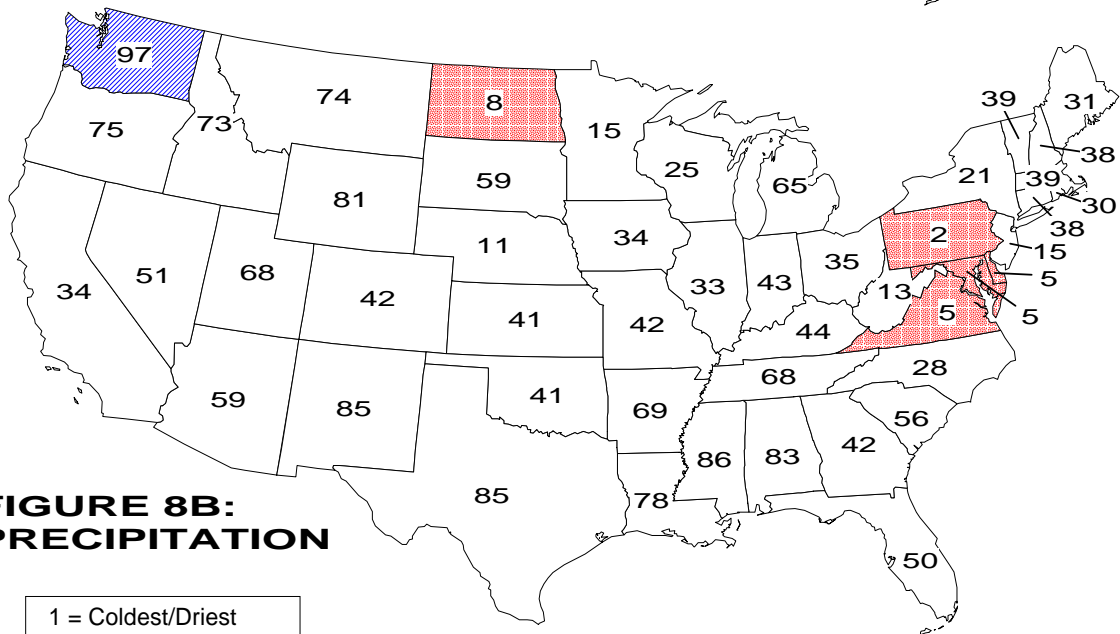
National Climatic Data Center, NOAA

Temperature and Precipitation Ranks for the contiguous United States. Each state is ranked based on its data from 1895-1997. States having a rank of top ten coldest or driest (rank 1-10) or top ten warmest or wettest (rank 94-103) are shaded.

JAN-JUNE 1997 STATEWIDE RANKS



**FIGURE 8A:
TEMPERATURE**



**FIGURE 8B:
PRECIPITATION**

1 = Coldest/Driest
103 = Warmest/Wettest

National Climatic Data Center, NOAA

Temperature and Precipitation Ranks for the contiguous United States. Each state is ranked based on its data from 1895-1997. States having a rank of top ten coldest or driest (rank 1-10) or top ten warmest or wettest (rank 94-103) are shaded.

Figure 7A shows, in illustrative map form, the June 1997 temperature rankings for the 48 contiguous states. Seven states, all located in the Southeast and South, were within the top ten cool portion of the historical distribution while an additional 13 states ranked within the cool third of the historical distribution. Only one state ranked within the top ten warm portion of the historical distribution while twelve others ranked within the warm third of the distribution.

June 1997 state ranks for precipitation are shown in **Figure 7B**. Four states ranked within the top ten wet portion of the distribution while twelve others ranked within the wet third portion of the distribution. Four states also ranked within the top ten dry portion of the historical distribution while eleven others ranked within the dry third. ***It should be noted that these June state categorical precipitation ranks are preliminary and should be used with considerable caution due to the high variability of precipitation on a small space and time scale.***

Year-to-date statewide temperature and precipitation ranks are shown in **Figures 8A and 8B**. Two states ranked within the top ten warm portion of the historical distribution while 13 others ranked within the warm third of the distribution. No state was within the top ten cool and only four ranked within the cool third of the distribution. Five states had their tenth driest or drier January-June period while twelve others ranked within the dry third portion of the distribution. Only one state was within the top ten wet portion of the distribution for the six-month period while ten others ranked within the wet third of the historical distribution for the January-June period.

It should be emphasized that all of the temperature and precipitation ranks on these maps and in Table 1 are based on preliminary data. The ranks will change when the final data are processed.

U.S. PERCENT AREA DRY AND WET JANUARY 1993 THROUGH JUNE 1997

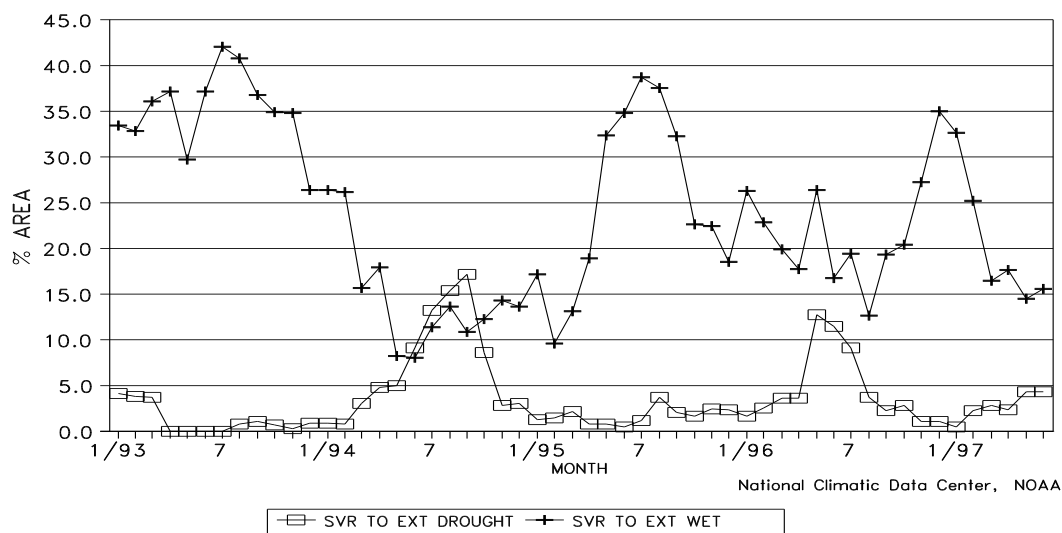


Figure 9: Long term drought coverage (as measured by the Palmer Drought Index) remained relatively low for the eleventh straight month, with June 1997 having slightly more than four percent of the country in severe to extreme drought. The percent area of the country experiencing severe to extreme wetness remained virtually unchanged during the last four months at about 16%. The core dry areas included limited portions of the Southwest while core wet areas included much of the Pacific Northwest, Northern Rockies, South Dakota, and portions of the lower Mississippi valley.

PRIMARY CORN AND SOYBEAN BELT PRECIPITATION MARCH–JUNE, 1895–1997

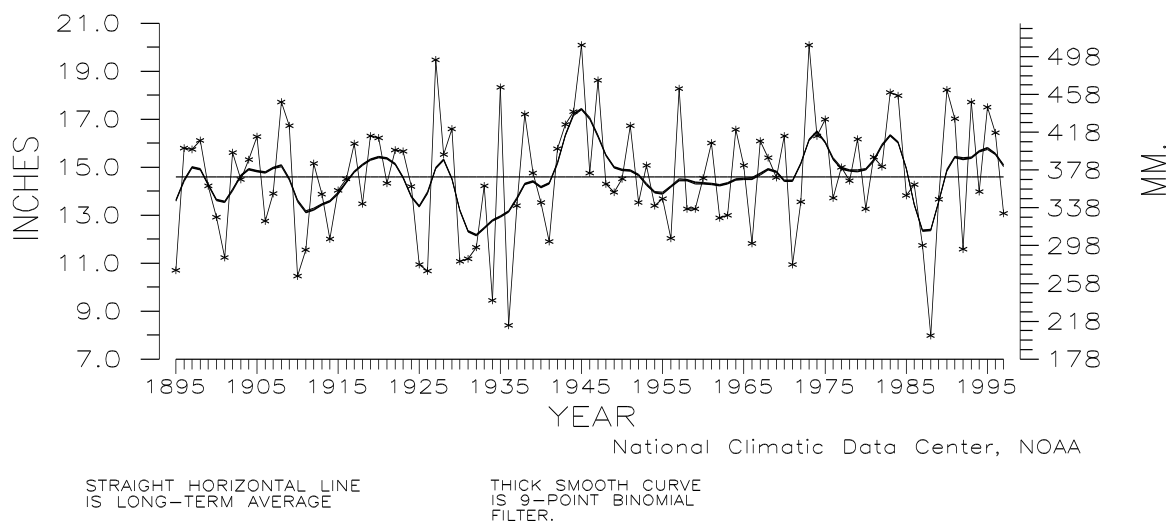


Figure 10: Preliminary data indicate that precipitation averaged across the Primary Corn and Soybean agricultural belt was below the long-term mean for the growing-season-to-date.

WEST REGION PRECIPITATION JUNE, 1895-1997

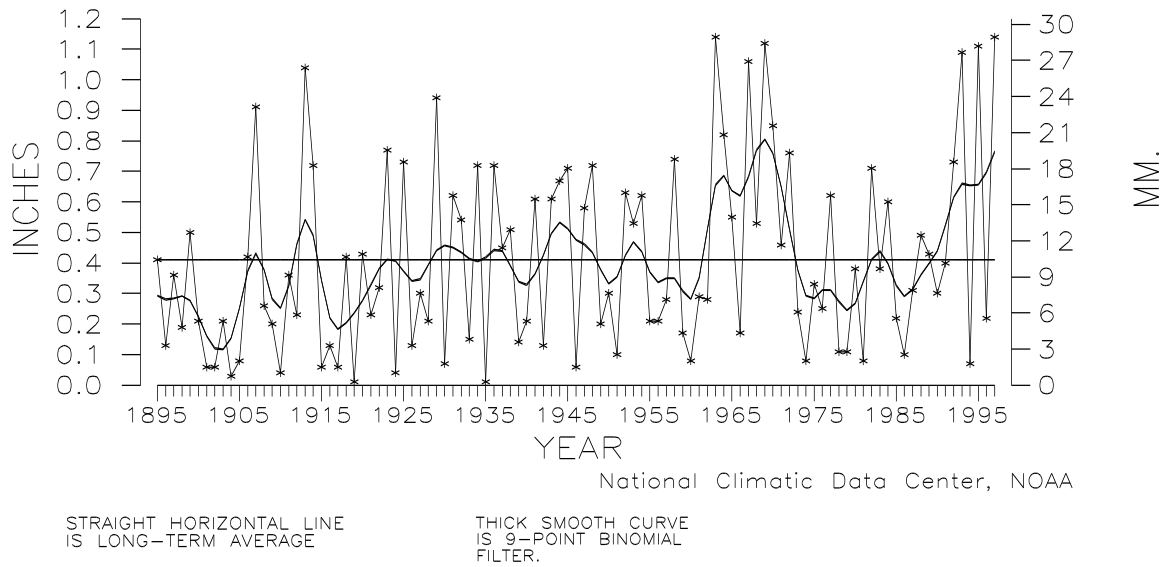


Figure 11: Preliminary data ranked June 1997 as the second wettest such month on record for the West Region. The West Region includes the states of California and Nevada.

NORTHEAST REGION PRECIPITATION JUNE, 1895-1997

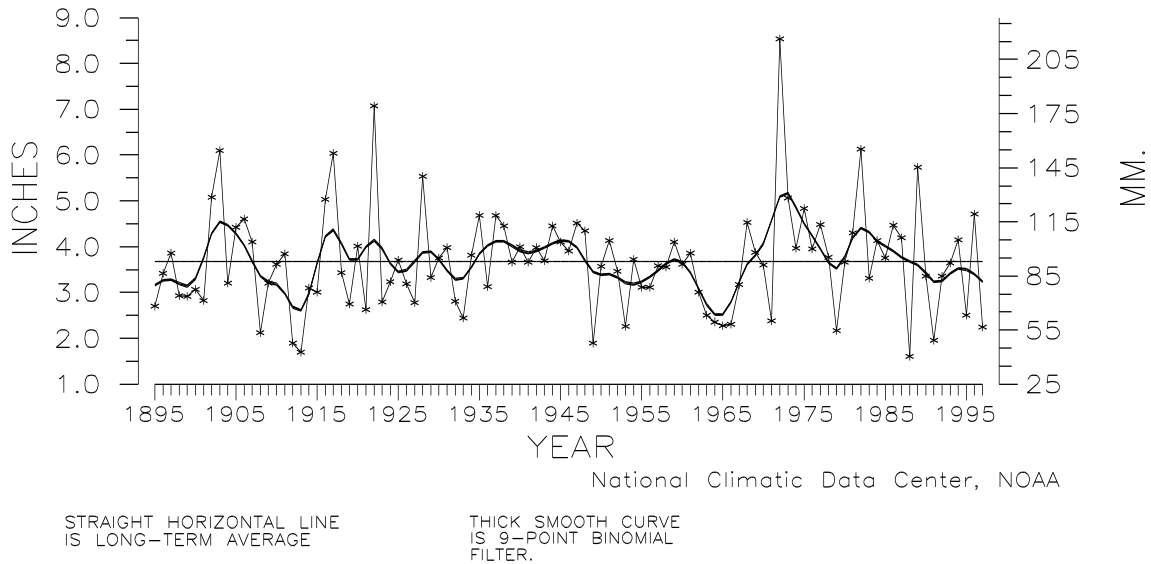


Figure 12: Preliminary data ranked June 1997 as the eighth driest such month on record for the Northeast Region. The Northeast Region includes every state from Maryland and Pennsylvania, northward.

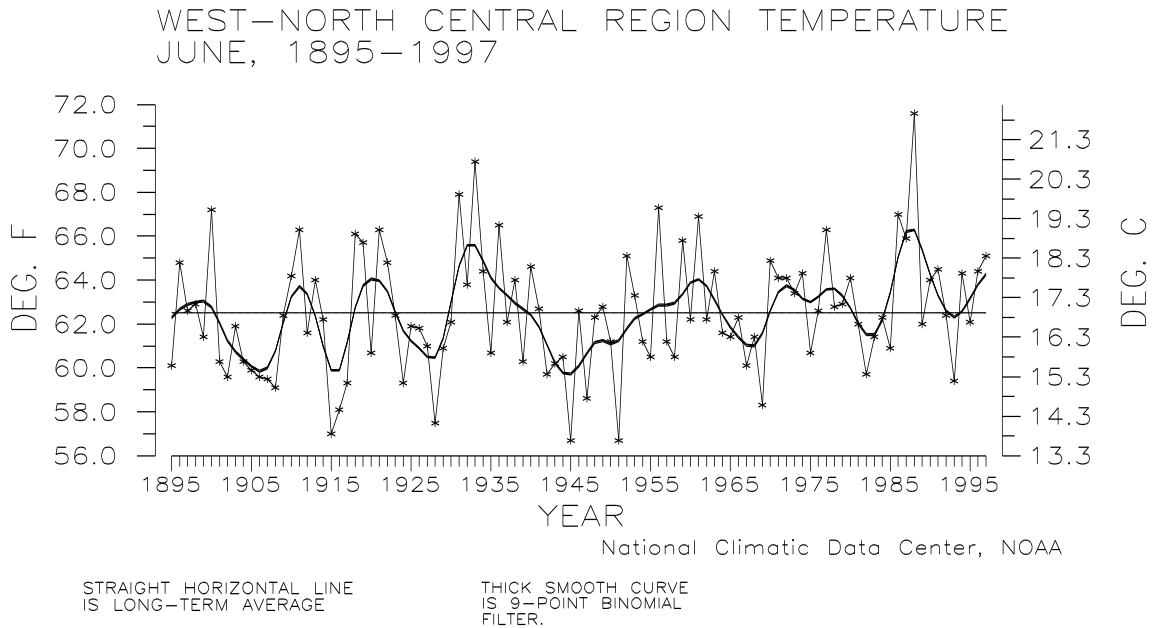


Figure 13: Preliminary data ranked June 1997 as the 17th warmest such month since 1895 for the West-North Central Region. The West-North Central Region includes Montana, Wyoming, North and South Dakota, and Nebraska.

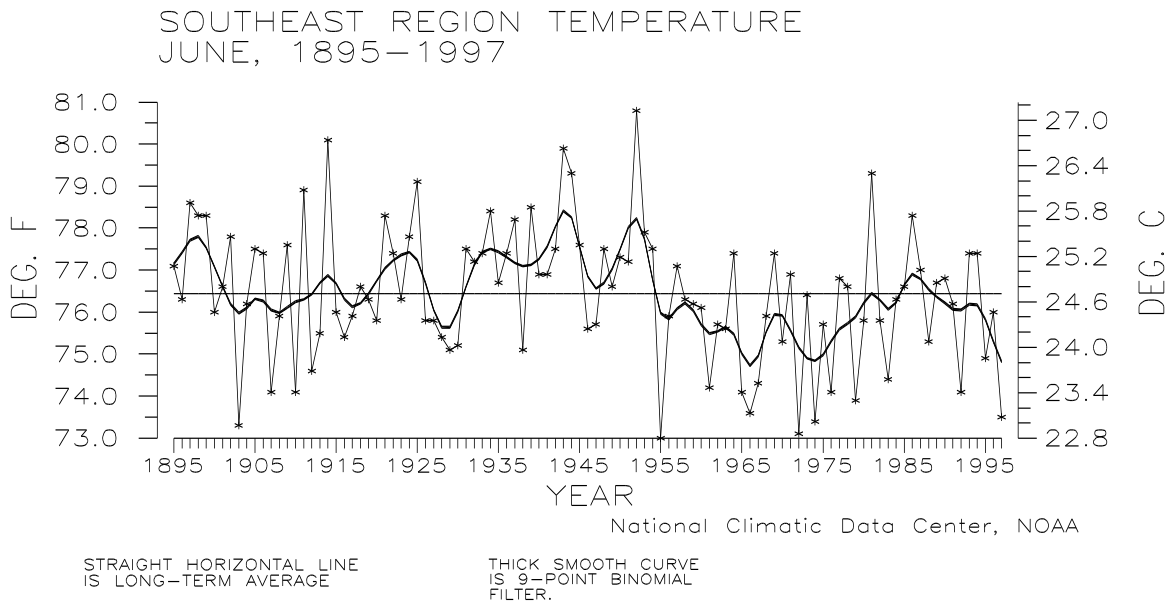


Figure 14: Preliminary data ranked June 1997 as the fifth coolest such month since 1895 for the Southeast Region. The Southeast Region includes the states of Virginia, the Carolinas, Alabama, Georgia, and Florida.

MONTHLY MEAN TEMP. ANOM. JUNE 1997

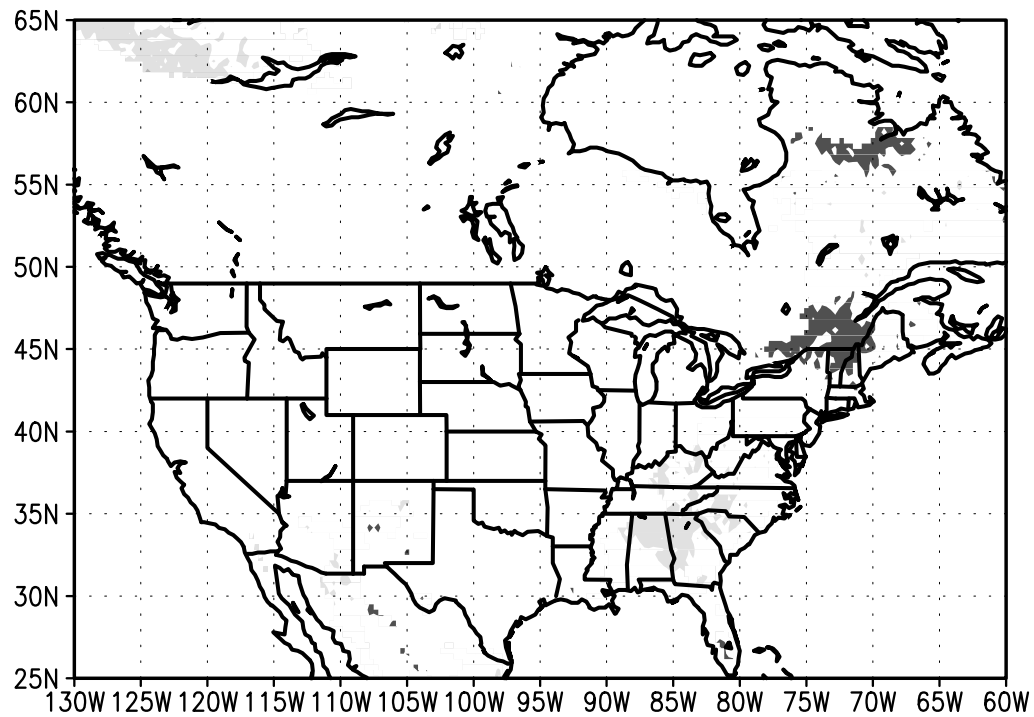


Figure 15

SURFACE WETNESS ANOM. JUNE 1997

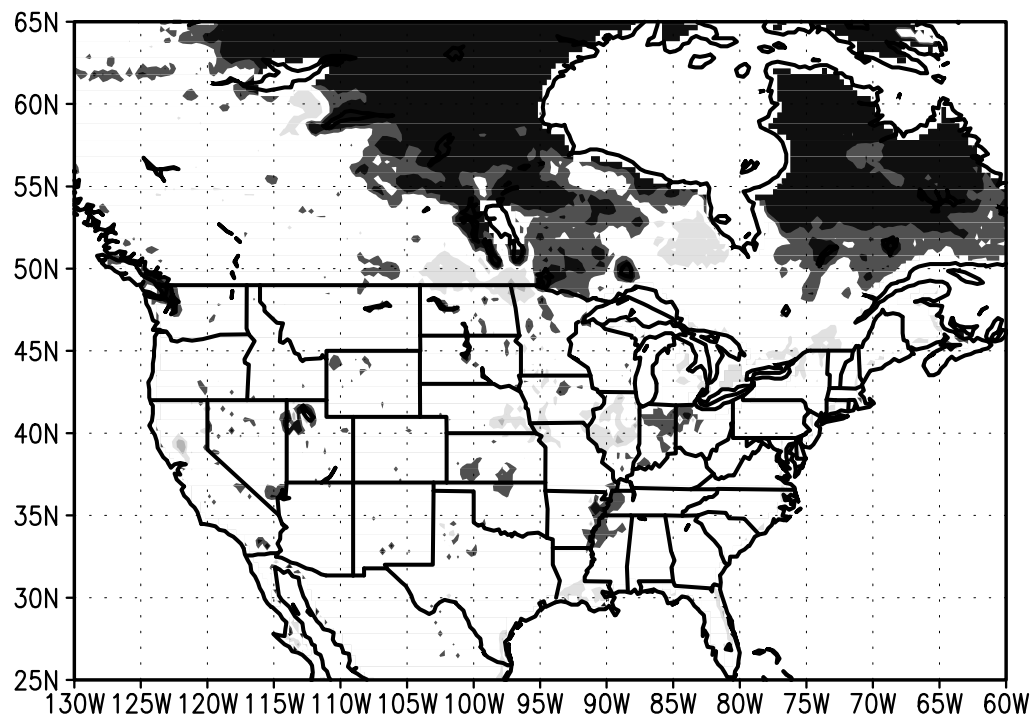


Figure 16

Figure 15 shows the mean monthly temperature anomalies from the month of June. The field is derived from the special sensor microwave imager (SSM/I), a polar orbiting satellite flown by the defense meteorological satellite program. This product is described in the May 1997 Climate Variations Bulletin. Slightly cooler than normal temperatures covered a portion of the southeast, and slightly above normal temperatures covered a portion of New England. The remainder of the country was near normal.

Figure 16 shows the mean monthly surface wetness anomalies from the month of June. The field is derived from the SSM/I. This product is described in the May 1997 Climate Variations Bulletin. Above normal wetness covered much of Canada, associated with the melting snow. Most of the U.S. was near normal.